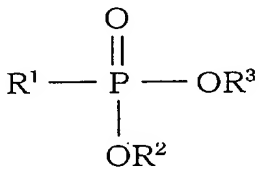
CLAIMS

1. A heat-resistant expanded graphite sheet in which an organic phosphorus compound is dispersedly contained in a proportion of 0.1 to 10% by weight.

2. The heat-resistant expanded graphite sheet according to claim 1, wherein the organic phosphorus compound is selected from the group consisting of an organic phosphonic acid and an ester thereof, an organic phosphinic acid and an ester thereof, a phosphoric acid ester, a phosphorous acid ester, and a hypophosphorous acid ester.

3. The heat-resistant expanded graphite sheet according to claim 2, wherein the organic phosphonic acid or the ester thereof is represented by the following general formula (1):

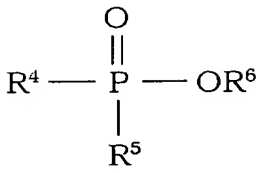


(1)

wherein R^1 is an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18, and each of R^2 and R^3 is a hydrogen atom, an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18.

4. The heat-resistant expanded graphite sheet according to claim 2, wherein the organic phosphinic acid or the ester thereof is represented by the following general

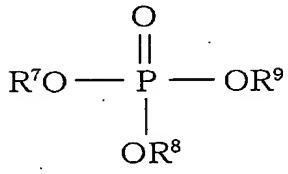
formula (2):



(2)

wherein R^4 is an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18, and each of R^5 and R^6 is a hydrogen atom, an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18.

5. The heat-resistant expanded graphite sheet according to claim 2, wherein the phosphoric acid ester is represented by the following general formula (3):

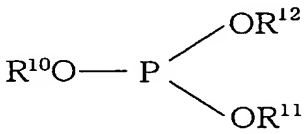


(3)

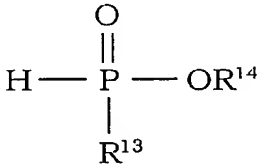
wherein each of R^7, R^8, and R^9 is a hydrogen atom, an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18, providing that a case where all of them are hydrogen atoms is excluded.

6. The heat-resistant expanded graphite sheet according to claim 2, wherein the

phosphorous acid ester is selected from a phosphorous acid triester which is represented by the following general formula (4) and a phosphorous acid diester and a phosphorous acid monoester which are represented by the following general formula (5):



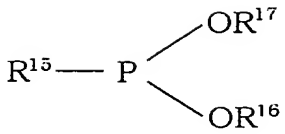
(4)



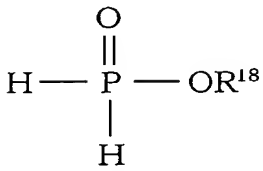
(5)

wherein each of R^{10}, R^{11}, and R^{12} is an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18, and each of R^{13} and R^{14} is a hydrogen atom, an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18, providing that a case where both of R^{13} and R^{14} are hydrogen atoms is excluded.

7. The heat-resistant expanded graphite sheet according to claim 2, wherein the hypophosphorous acid ester is a hypophosphorous acid diester (phosphonite) which is represented by the following general formula (6) or a hypophosphorous acid monoester which is represented by the following general formula (7):



(6)



(7)

wherein R^{15} is a hydrogen atom, an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18, and each of R^{16}, R^{17}, and R^{18} is an alkyl group having a carbon number of 1 to 10, an aryl group having a carbon number of 6 to 18, or an aralkyl group consisting of an alkylene portion having a carbon number of 1 to 10 and an aryl portion having a carbon number of 6 to 18.